

REMARKS

Claims 22-24, 26, 33-36, and 38-41 have been cancelled without prejudice or disclaimer, these claims having been cancelled to reduce the issues presently before the Examiner.

Reconsideration is respectfully requested for claims 19-21, 25, 27-32 and 37, said claims having been variously rejected as follows.

Claims 32 and 37, have been rejected under 35 U.S.C. 102 based upon US Patent No. 7,097,501 to Shah (the '501 patent). This rejection is respectfully traversed. The features found in Claims 32 and 37 are neither disclosed nor suggested in the Shah '501 patent. The Shah patent is directed to an apparatus for electrical transmission having one or more thin dielectric layers made of diamond-like coating, diamond-like thin film, or controlled atmosphere plasma sprayed ceramics. '501 Patent, Column 5, lines 30-45. The Shah patent discloses these coatings being no more than approximately 500 μm thick and preferably no more than 100 μm thick. '501 Patent, Column 5, lines 22-30. The Shah '501 Patent also discloses an outer body or housing preferably comprised of metal, but that may be comprised of plastics, ceramics, glass and composites. '501 Patent, Column 5, lines 47-53. Therefore, the Shah reference discloses the combination of a diamond like film and a metal, glass or ceramic body. In sharp contrast, Claims 32 and 37 claim the combination of separate glass seal and ceramic insulator and a metal body. Additionally, in contrast to the present invention, which shows a combination of glass seals and ceramic insulators (along the length of the electrical conductor) that are separate from one another, the Shah reference only discloses a single, constant material along the length of the entire electrical conductor (the layers of film). For example, if you look down the length of the conductor of the Shah reference (FIG. 2A-2D), the sole material (104) that touches the conductor (102) has a constant composition. In sharp contrast, if you look down the length of the conductor of the invention as described in Claims 32 and 37, there are separate glass and ceramic insulators, both touching the conductor. It is therefore respectfully submitted that Claims 32 and 37, as amended, distinguish over the Shah '501 Patent.

Claims 19-21 and 25, 27-31 have been rejected under 35 U.S.C. 103(a) based upon US Patent No. 7,097,501 to Shah in view of US Publication No. 2003/0032339 to Bell et al (the Bell

Publication). This rejection is respectfully traversed. The features found in Claims 19-21 and 25, 27-31 are neither disclosed nor suggested in the Shah '501 patent in view of the Bell publication. Both of the cited references, Bell and Shah, disclose only a single dielectric material along the length of the electrical conductor. As discussed above, the Shah reference discloses a continuous material along the length of the conductor. The Bell reference shows only a thermoplastic dielectric body that is made from a polyetherketoneketone (PEKK) or a derivative of polyetherketoneketone and containing fillers such as glass, silicates, fiberglass, calcium sulfate, asbestos, boron fibers, ceramic fibers, polyamide fibers, aluminum hydroxide, barium sulfate, calcium carbonate, magnesium carbonate, silica, alumina, aluminum nitride, borax, activated carbon, pearlite, zinc terephthalate, Buckyballs, graphite, talc, mica, synthetic Hectorite, silicon carbide whiskers, or fullerene tubes. Bell Publication, Page 5, Paragraph [0038]. The material has a constant composition along the length of the conductor in the Bell reference. The claims in the present invention require that there be a glass seal and a thermoplastic seal that are separate from one another and both being in contact with the electrical conductor. Additionally, many of the claims require that there be an additional ceramic insulator that touches the electrical conductor. Therefore, because the separate glass seal, ceramic insulator and thermoplastic body are all in contact with the electrical conductor, the material composition is not constant along the length of the conductor, as disclosed in both references cited by the Examiner.

Neither of these two references cited by the Examiner disclose having a layer of glass acting as a seal as required by the claims of the present application. In the Bell reference the only mention of glass is in terms of glass being a filler in the thermoplastic material. See Bell, Page 5, Paragraph [0038]. Even if the dielectric material in Bell is sealed to the conductor, the glass filler, i.e. fiber, is not sealing anything, it simply acts as a filler to modify the physical and chemical characteristics of the thermoplastic body.

Additionally, with all due respect, Table 2 does not disclose the use of ceramics containing glass, but rather suggests using "high quality thermoplastic materials" (PEKK and PEEK) with glass fiber fillers. See Bell Publication, Paragraph [0009]; Table II.

Finally, neither of these prior art references cited by the Examiner disclose having the combination of a glass seal and ceramic layer and a thermoplastic jacket. The glass seal, the one or more ceramic layers, and the thermoplastic jacket are separate from each other, but each touches the electrical conductor. The combination of the glass seal and thermoplastic jacket, with or without a ceramic layer, is a major advancement in this art, a combination which is neither disclosed nor even suggested by the prior art. Furthermore, none of the prior art disclose the combination of the glass seal and a ceramic layer wherein the glass has a operating temperature greater than 500°F.

The Examiner has also cited U.S. Patent NO. 6,632,104 to Quadir as being considered to be pertinent to this present application. The Quadir patent is of no more relevance than the Shah reference and the Bell, et al reference. Quadir uses a plastic resin (Col. 3, Lines 56-65) which can take various forms, but there is no disclosure or suggestion of using different materials (such as glass, ceramic and thermoplastic) in the same connector.

A favorable consideration is respectfully requested for newly added claims 43-77. Independent claims 42 and 48 pertain to a connector with the combination of the glass seal and ceramic insulator, wherein the glass seal operates at temperatures greater than 500°F. As stated above, none of the prior art discloses this combination. Independent claims 49 and 50 pertain to a connector with a combination of a glass seal and a thermoplastic jacket. Again, this combination is a major advancement in the art and is not disclosed by the prior art.

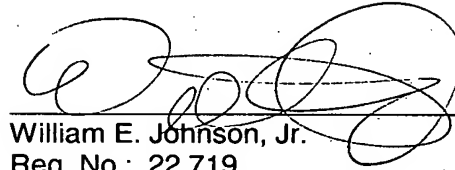
It is therefore respectfully submitted that Claims 19-21, 23-32, 37 and 42-80 fully distinguish over the art of record. Therefore, Claims 19-21, 25, 27-32, 37, and 42-77 are believed to be in prima facia condition for allowance.

The Commissioner is authorized to charge any fees which might be due or payable to Deposit Account No. 13-2166.

Undersigned counsel for the applicants would appreciate a telephone conference with the Examiner should the Examiner be of the opinion that such a conference would assist in the further prosecution of this matter.

Respectfully submitted,

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Date



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